Health Information Exchange Taxonomy
Blackford Middleton

Level	Description	Examples
1	**Non-electronic data**	No PC/information technology
2	**Machine-transportable data**	Fax/Email
3	**Machine-organizable data**	Structured messages, non-standard content/data
4	**Machine-interpretable data**	Structured messages, standardized content/data

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HIEI National Net Cost-Benefit Blackford Middleton

	Net Return over 10-year Implementation	Annual Net Return after Implementation
Level 2	$141B	$22B
Level 3	-$34B	$24B
Level 4	$337B	$78B

Value of HIE standards is the difference between Level 3 & 4

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Conclusions
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- NHIN is a good investment
- Standardized Level 4 HIEI is by far the best investment
  - Non-standardized HIEI is not a good investment.
  - Interfaces are expensive
- We must set minimal standards

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How can PHIN contribute to interoperability?

- Public health intrinsically must exchange information with all clinical partners in a population
- Evident public value—outbreak detection, preparedness
- ROI for decreased reporting burden
- Development of data use agreements

How can PHIN accelerate interoperability?

- Concrete experience with common interoperability use cases eg Electronic Laboratory Results Reporting
  - bidirectional secure message transport (PHIN-MS)
  - HL7 Versions 2.3, 2.5, 3
    - message formats
    - implementation guides
  - use of controlled vocabulary eg LOINC, SNOMED

Electronic Laboratory Results Reporting, April 2005